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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,412	01/06/2005	Alessandro Scardovi	000280.00050	5453

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WASHINGTON, DC 20001

EXAMINER

CHRISTENSEN, RYAN S

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/520,412	SCARDOVI, ALESSANDRO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ryan Christensen	2856	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) 10-12 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 9 is/are rejected.
- 7) ☒ Claim(s) 1, 2 and 4-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/06/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/06/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

#### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### *Election/Restrictions*

2. Claims 10-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9-11-06.

#### *Response to Amendment*

3. The amendments to the claims and specification are entered. The possibility of new matter has been considered in light of MPEP 2163.07, however the examiner finds that based on the original disclosure it would be obvious you want to determine the voltage of the capacitor 13, and not the resistor, because the capacitor is charged for a determined time to reach a voltage. The voltage across the resistor on the other hand is the same no matter how long the current is applied. Only measuring the voltage on the capacitor would result in a relationship proportional to the integral of the current as disclosed on page 8.

***Specification***

4. The disclosure is objected to because of the following informalities: In equation 1 at line 14 of page 8 it is unclear whether  $R_s$  is intended to be in the numerator or denominator of the equation. Please clarify with parenthesis or something like the following:  
$$V_x = \frac{TpVp}{CxRs}$$
5.  $V_x = \frac{TpVp}{CxRs}$
6. The disclosure is objected to because of the following informalities: As amended the specification is not completely consistent with character references "29" and "30." The converter is still referred to as "30" in at least the paragraph starting at page 11, line 1.
7. Appropriate correction is required.

***Drawings***

8. The drawings are objected to because reference character 5 is designated as an electrode in the specification, but figure 2, reference character 5 points to the exterior wall of the cartridge. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

9. Claim 1 is objected to because of the following informalities:
10. On line 4, "wherein said variable resistance is influenced" would be more clear than "and."
11. On line the last line, "said environmental conditions" has been deleted, it appears "said environmental conditions and" should have been deleted.
12. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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14. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
15. Claims 9 recites the limitation "said ink" in the last line. There is insufficient antecedent basis for this limitation in the claim.
16. With respect to claim 9, it is not clear what is "powered by said voltage source," something to the effect "said detection means being powered by said voltage source" would be more clear.
17. "Normally off, connected in series to dais pair of resistances" is unclear. "Wherein said second transistor is normally off and is..." would be more clear.

***Allowable Subject Matter***

18. Claim 13 is allowed.
19. Claims 1, 2 and 4-8 are objected to for the reasons above.

***Pertinent Prior Art***

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
21. U.S. Patent 4,283,719 (Williams et al.) discloses a liquid level monitoring apparatus where the current generated from a variable resistor, whose resistance varies as a function of liquid level. The signal is evaluated with a differential circuit in order to determine the rate of change of the voltage signal.

However, there is no teaching to take a time measurement when the level is full and charge a capacitor for the stored period in order to evaluate the fluid level.

22. U.S. Patent 5,613,398 (Lawson) discloses a module for measuring the level in a fuel tank that works by charging a capacitor at the full level and timing the discharge of that capacitor.
23. U.S. Patent 3,375,716 (Hersch) discloses a capacitive type level sensor where a capacitance changes based on the fill level of a container.

### ***Conclusion***


24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Christensen whose telephone number is 571-272-2683. The examiner can normally be reached on Monday - Friday, 8am - 5pm.
25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RC

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